Baacadia

Game Design Document

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Concept Statement

Baacadia is a 3D exploration shepherding game where you guide a herd of mysterious creatures on a stirring and breathtaking journey across an alien world. Using sound-based mechanics and careful observation, you build trust, solve environmental puzzles, and uncover the hidden lore of the land.

Genre: Exploration Puzzle Adventure
Target Audience: players who are innate explorers and adventurers, players who love to have conventions challenged.

References & Inspiration

Game References

Pikmin for creature-guided, tactile shepherding within an ecosystem, and **Outer Wilds** for curiosity-driven, systemic exploration and clear cause–effect discovery.

Art Style

Moebius-inspired **ligne claire**: clean, confident lines, vast horizons, and flat, luminous palettes that favor silhouette and color shifts over heavy shading. Elegant, slightly surreal forms keep the world airy and readable at a glance.
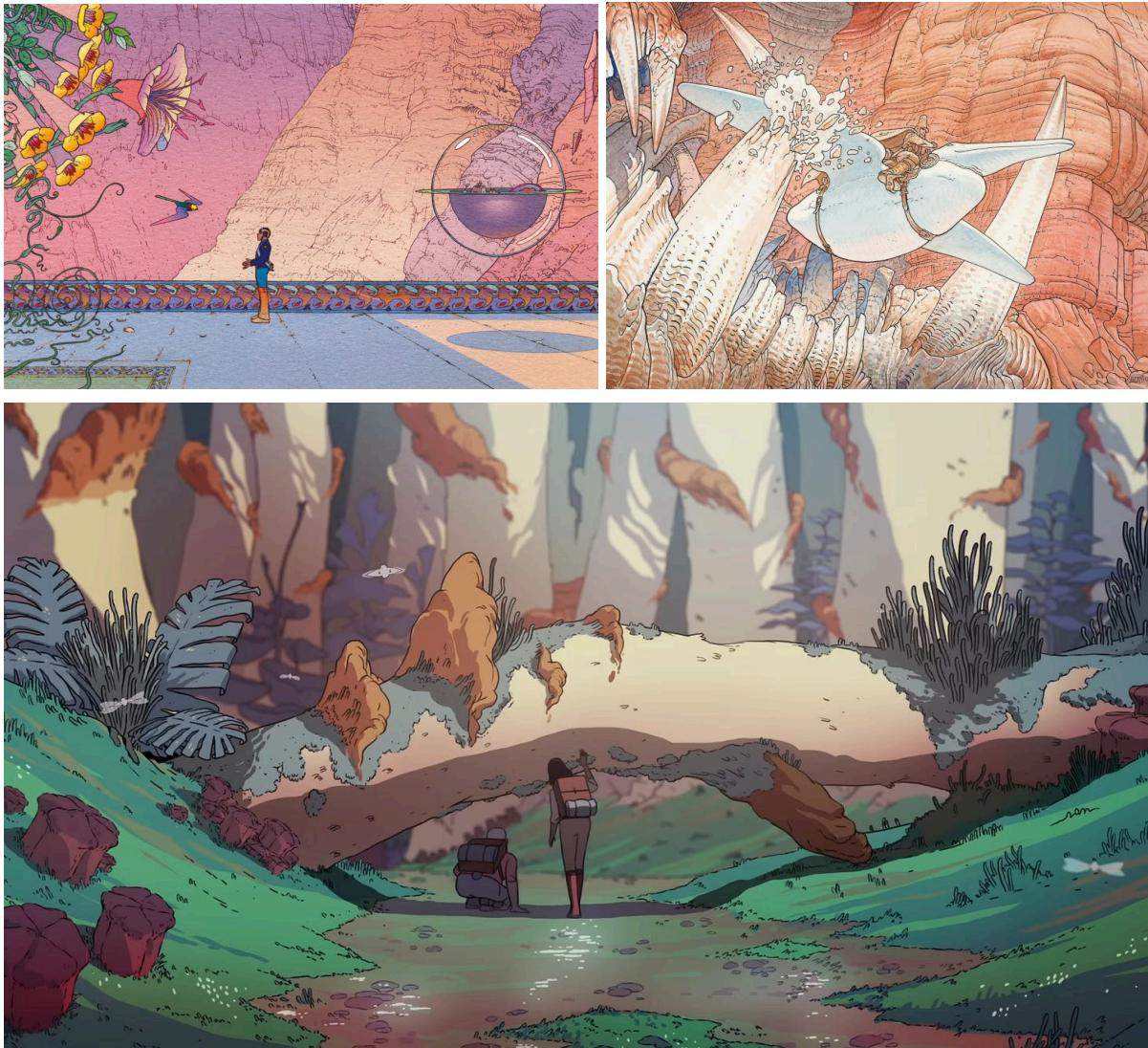
Target Audience & Distribution

Target Audience: Players who enjoy curiosity-driven exploration, systemic puzzles, and creature companionship. Age Range: 13+
Platform: Windows 10+, mid-to-high-spec computers
Distribution: Steam & itch.io

Project Goals

1. Baacadia focuses on player experiences. We should playtest often and iterate often. Making a fun and enjoyable experience is the core pursuit of our team.
2. We will stay flexible for future plans of expanding into a full-length game, but the current focus of development should be on the scope of AGP.

Experience Goals

- Through shared reliance and caring interactions, players are inclined to feel connected to sheep in their herd, and see sheep as their lovely companions.
- When players begin to recognize patterns in the world through their own observations, they are driven by their desire for knowledge and a sense of wonder as they explore this world, feeling curious.

Design Pillars

Curiosity-First Exploration
- Players follow their curiosity in a living sound-ecology. Meaning emerges by listening, observing, and trying—*not* by being told.
- The world is legible: distinct creature calls, body language, and environmental cues hint at affordances.

Sheep as Guides & Companions
- Sheep help the player navigate the world. Sheep are native to the ecosystem; they interact with flora, fauna, and terrain, revealing how the world works.
- They should be seen as the player's guides and companions, and players should build emotional bonds with them.

Terrarium Level Design
- Each space functions as a compact eco-loop where small actions trigger clear, observable cause-and-effect across creatures and environment.
- Environment layout, sound, and creature's motion invite hypotheses, and experiments return fast, visible feedback with intermediate states that teach.

Controls

Context: In Game

Action	Keyboard & Mouse	Controller	Event Type	Constraints/Contexts
Move	WASD	Left Joycon	OnKeyHold	
Look	Mouse	Right Joycon	MouseMove / StickInput	
Jump	Space	A Button	OnKeyDown	Cannot Jump in the air or on slopes steeper than player slope limit.
Interact	E	X Button	OnKeyDown	Player default animation if nothing to interact with. If within the interaction radius AND the player character faces the object, does the interaction.
Play Sound	Left Mouse Button	B Button	OnKeyDown	Play selected sound on press.
Record Sound	Right Mouse Button	Y Button	OnKeyHold	If within the radius of a recordable sound AND the sound is currently playing, record the sound.

Context: UI

Action	Keyboard & Mouse	Controller	Event Type	Constraints/Contexts
Select Sound	Middle Mouse / Scroll	D-pad left & right	OnKeyDown	

Cancel/Exit	Q	B Button	OnKeyHold	When on screen blocking UI is active. Hold for 1.2 sec to confirm
Select	E	A Button	OnKeyHold	When on screen blocking UI is active. Hold for 1.2 sec to confirm

Third-Person Camera

Camera Notes

- The camera **rotates independently** from the player's rotation. (Use mouse to rotate camera and WASD to rotate main character)

- Should smoothly follow and adjust to terrain and environmental occlusion.

- Consider camera collision handling (e.g., zoom in if blocked).
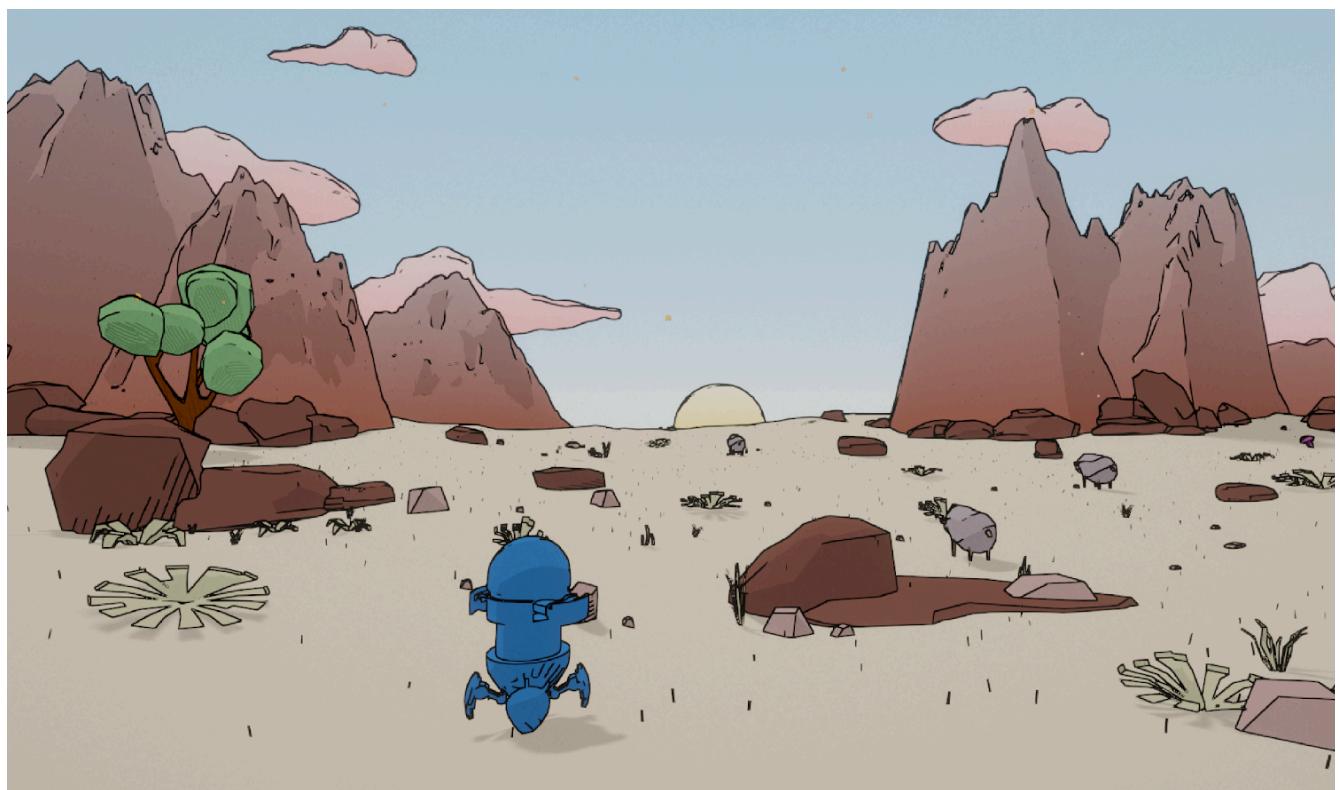
Core Loop

The Player should follow the loop of **Observe → Experiment → Succeed** in each level and try to solve each puzzle. The player can fail multiple times before their experiment produces a successful result. But each attempt should be meaningful, not frustrating. See Level Design Example in below section for example.
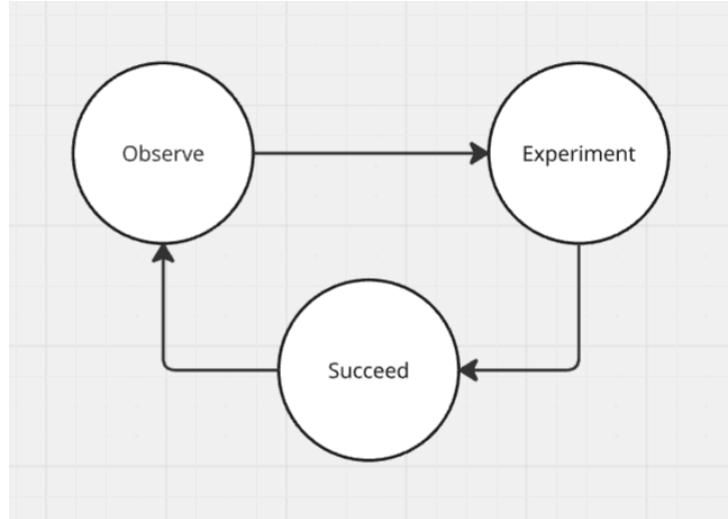
Overall the player's main mission goal should be a loop of **Encounter Noise → Get to the Source → Purge the Noise → Unlock New Areas and encounter new Noise.**
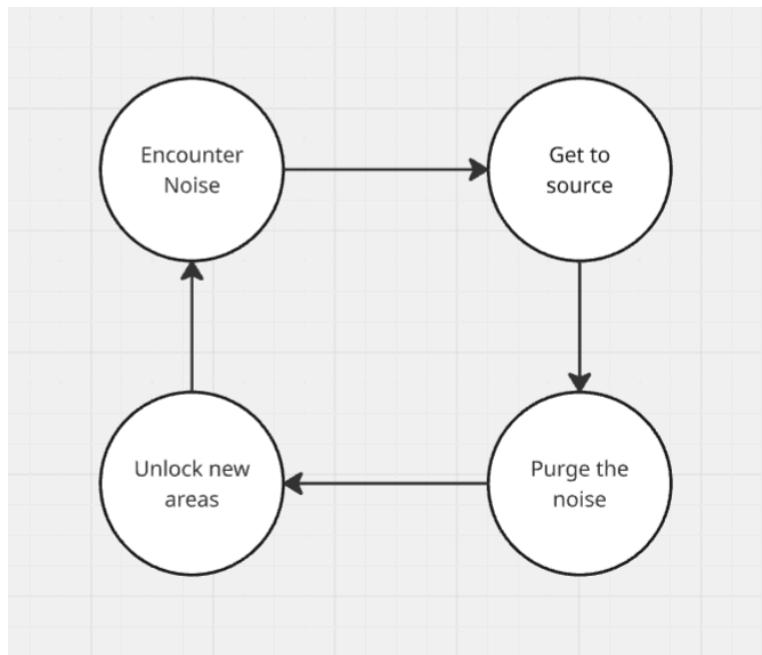
Player Goal

You are a sound-collecting robot shepherding sheep through a foreign ecosystem. Your visible mission is to **track and purge corrupting Noise** from ancient relics; your enduring motivation is to **collect sounds** and **learn how this world works**.

Primary Mission (Explicit)

- **Identify → Reach → Purge Noise sources** tied to ancient tech relics in each region.

- **Stabilize the ecosystem** after purging (creature behaviors normalize, paths open, story advances).

Secondary Motivation (Character Hobby)

- **Collect unique calls** into a personal sound archive (see Sound Collection System & Notebook section for details).

- **Use** one recordable sound slot for problem-solving and communication with this unknown foreign world;

Subtle/Enduring Goal (Implicit)

- **Understand the ecosystem** by observing cause→effect, building trust with sheep, and decoding interspecies signals.

- **Travel for curiosity's sake**—discover landmarks, behaviors, world history, and hidden interactions beyond the critical path.

Core Systems

1. Sound Behavior

1.1 Sound Properties

Sound is used as both a **narrative metaphor** and **gameplay mechanic.** Sound waves connect the player with their herd and other creatures. Depending on their natural habits, different sounds may have different effects on different species.

Two sound types with distinct roles:

- **Special Sounds = flock commands.** Permanent abilities learned in the tutorial; primarily used to influence and coordinate sheep.

- **Recordable Sounds = world interactions.** Unlimited storage for sounds captured from the environment; players can access and select from their growing collection to influence sheep, other creatures, and environmental systems.

1.1.1Special sounds (Permanent)

Players will have **2** Special Sounds that will be permanent for players to use.
The special sounds are core player abilities that the player obtains in the tutorial level of the game.Currently there are 2 sounds:

1. **Sound of Drive:**When activated, sheep will move forward toward the **player's screen center point**. If the emitter stops, the creature will also stop. If a sheep exits the drive mode radius, they will stop. Sheep movement will start with a delay or a speed up animation. Will match the same speed as the player. *Have other potential effects on different creatures.*
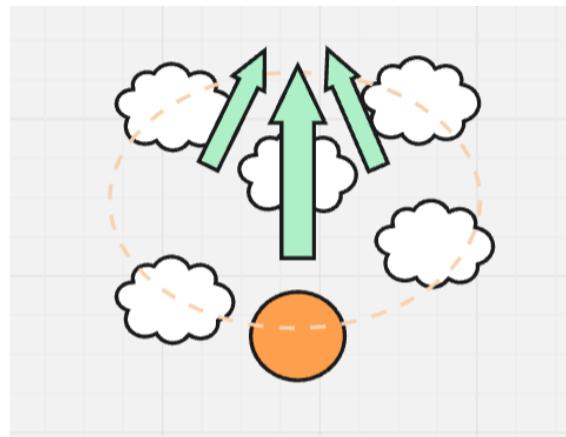
2. **Sound of Gather:** Sheep hearing this sound will approach the sound source and merge. *Have other potential effects on different creatures.*
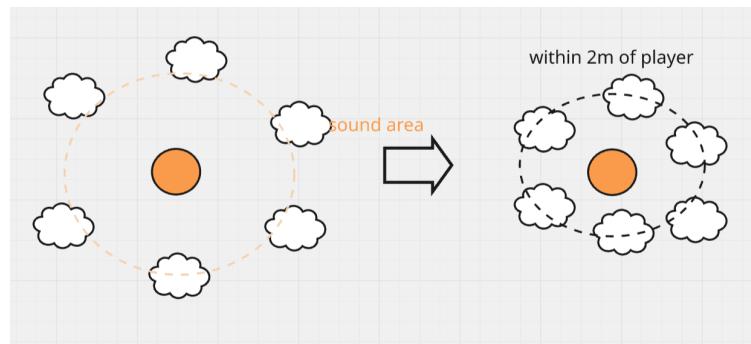
Sound Name	State Sound / Event Sound	Effect	Creature (Source)
Drive sound	State Sound	Sheep in radius move forward toward the **player's screen center point**	Bird call
Gather sound	State Sound	Approach the sound source; Gather towards player	Gather fruit on Bush

1.1.2 Recordable sounds

Players can record sounds from the environment (excluding special sounds). Once recorded, the sound is stored in the **Sound Notebook**, where it becomes permanently accessible. The player can then select and use any sound from their notebook to interact with the environment. Recording a new sound adds it to the notebook rather than overwriting existing ones, gradually expanding the player's collection.

Example Recordable Sound For Reference

Sound Name	State Sound / Event Sound	Effect	Creature (Source)
Puff sound	Event Sound	Makes sheep puffy and inflate	Pufferfish Mushroom (to scare off prey, bouncy)
Float sound	State Sound	Makes sheep / creature float	Walking Dandelions (makes sound when there is wind, can walk around when no wind)
Glow sound	State Sound	Makes sheep wool glow	Cynops orientalis / newts in a cave
Camouflage sound	Event Sound	Makes sheep camouflage	Intimidate predator so they can pass predator's habitat safely
Harden sound	Event Sound	Makes sheep Patrify, heavier, stationary (become stone)	Rock crab

Each sound event will have a source, an angle of effect, a length and a radius. Some environments can generate sound events that are omnidirectional, but most sound events, like player generated sound events, will be cone shaped.

For example, *Drive* is camera-aligned: **it always pushes sheep within 2m sound radius, towards the player camera's forward direction**. On the other hand, *Gather* will have a much larger radius of 5m, which will gather the flock towards the player's position.
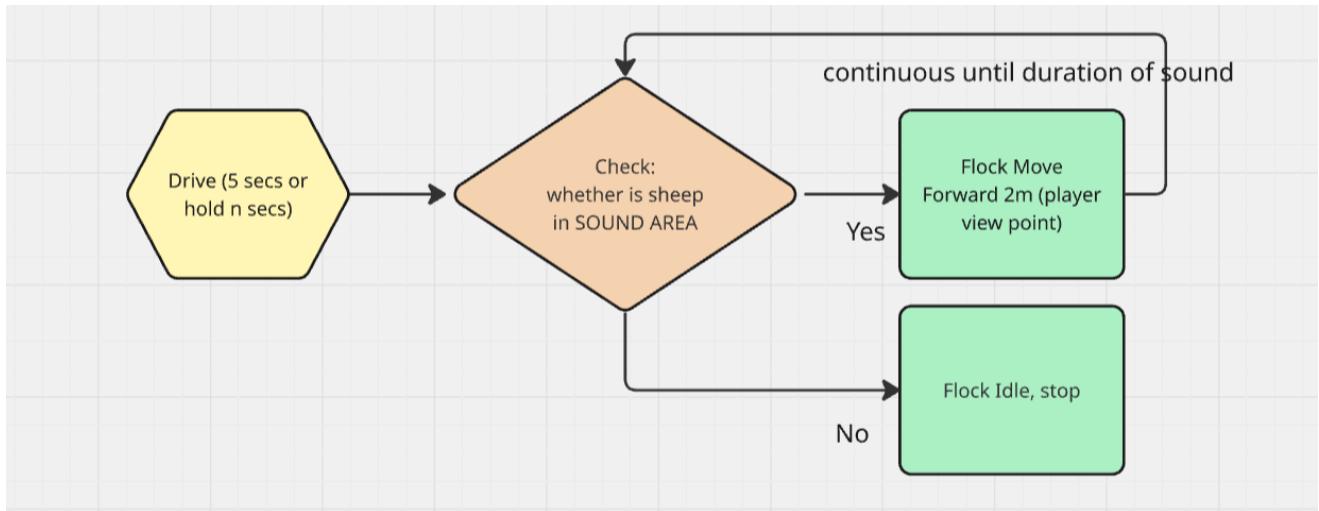
2. Player Abilities

2.1 Movement / Interaction

- **Walk**: Standard directional movement. Slow pace to encourage observation and collaboration (with sheep).
- **Jump**: A low-height jump for light platforming and navigating uneven terrain.
- **Pet**: Contextual button when near a sheep. Tend sheep, form bonds with sheep.

2.2 Sound Interaction

- **Play Sound**: Players can emit sounds to influence sheep. The behavior depends on the sound type:
  - **State Sound:** Activated by **holding the left mouse button**. The sound continues as long as the button is held and stops when released.
  - **Event Sound:** Triggered by a **single left mouse click**, playing once without needing to hold.
- **Record Sound:** When the player approaches a recordable sound's source, the player can record the sound by **holding the right mouse button** and store it in one of the sound slots.

2.3 Knock Out and Retry

The player cannot "die" and therefore doesn't have a health bar. But various terrains and obstacles may *knock out* the player who's then carried to the last save point by sheep. This mechanic allows challenging designs while keeping the emotional tone light without any survival stress. It is generally infrequent for the player to be knocked out, and safe points are dense which means progression lost will be minimal.

3. Sheep Behavior

3.1 Sheep Abilities

3.1.1 Steep Incline Traversing
The sheep can traverse on steep inclines, climbing slopes the player's character can't access.

3.2 Sheep Death & Revival System

When a sheep dies—by falling, being attacked, or crushed by environmental hazard—it becomes a small soul that quietly follows the player. These ghostly sheep don't interact with puzzles but remain as a reminder of the loss. To bring them back, the player must collect a special revival resource called a **soul flower**, often hidden in peaceful or hard-to-reach areas. At designated **save points**, players can use a soul flower to restore a sheep to life through a gentle, symbolic animation. This system encourages emotional connection, thoughtful care, and exploration, while adding tension and meaningful choices to the shepherding experience.

4. Saving System

Save points are marked by one specific creature (to be determined). Whenever the player is knocked out, they will be sent back to the closest activated save point by sheep. All progression will be saved. Players can also revive dead sheep at save points by using resources like soul flower.

5. Sound Collection System / Notebook

When the player records a new sound, it's added to the robot's notebook and (optionally) auto-equipped to the single **Recordable Sound** slot. Special Sounds are not replaceable.

Notebook Purpose
A living codex that tracks calls you discover; it's also a **player goal**—completing the archive should feel clear, meaningful, and rewarding.

Notebook Entry Includes:

- **Creature:** name, thumbnail, habitat/biome, creature behavior notes (if any).

- **Sound Behavior (Hint):** slight hint that might include trigger conditions, range/direction/duration, common effects on creatures/environment or notable risks.

- **Sound Captured:** Sound from this creature, with playback.

Map Overview

The world of *Baacadia* will be divided into 3 unique areas/biomes, each presenting different ecological systems and shepherding challenges. While exact level layouts are still in development, the following overview outlines the intended scope, rough playtime, and thematic differences between areas.

Projected Scope

- **Number of Areas:** 3 distinct regions, plus a tutorial introduction and a possible finale space.

- **Estimated Playtime:** ~5–10 minutes per area (including exploration, puzzles, and observation), for a total of ~30 minutes of core play.

- **Progression:** Areas are loosely connected in a hakoniwa style, where players are free to explore and revisit. Each area offers new creatures, sound interactions, and environmental puzzles that expand the player's sound toolkit.
- Level 1: Life Cycle. Level 2: Distress Signal. Level 3: Natural and Unnatural.

Environments

1. Noise

The purpose of this design is to introduce a common challenge to all the levels and add tension to the process of exploration. It should also emphasize the importance of sheep.

Noise afflicted areas are difficult to traverse. It will affect the player's ability to see with glitches and noises disrupting their visual and auditory perception. Staying in a noise afflicted area for too long will knock out the player.

1.1 Noise Affliction Points

Being inside a noise area will accumulate *noise affliction points(NAP)*. Once NAP reaches 100, the player will be knocked out. If the player is no longer affected by noise, NAP will start to decrease at a constant rate.

1.2 Sheep and Noise

Sheep have the ability to purge noise. They will not be affected by noise. Each sheep in the proximity of the player will also grant the player increased NAP resistance. The max NAP accumulation will increase, which will help the player traverse through noise areas with more ease.

If the player is knocked out by the noise, sheep will carry the player to the nearest save point. If there were no sheep near the player when the player was knocked out, a sheep will spawn near the player when he respawns at the nearest save point.

1.3 Noise Effects on the Environment

Different species have different amounts of NAP. Some species may even adapt to noise and be able to live inside noise or produce noise themselves. If a creature's max NAP is reached, it will be knocked out as well. They will recover once they are no longer in contact with the noise.

If the player spots a knocked out creature, the player can interact with it and have a sheep carry it on their back. The creature will be dropped when the player interacts with the carrying sheep.

1.4 Sources of Noise

Noise is produced by fragments of *Caretaker Technologies*. They can also be recorded and played by other species. They will affect a fixed radius of surrounding areas depending on the strength of noise. They can be turned off by sheep. Sheep will disable the relic and consume the noise. Each relic also holds some fragments of narrative, which will help the player understand the world and themselves. The message in the relic will be played through the sheep as audio files, and the player can always check the information in the Index.

2. Creatures

Creatures Definition & Example

Creatures are the world's **living interface**—they broadcast calls, body language, and routines that teach the player how systems work. They **gate and enable progress** by reacting to Special and recorded sounds, propagating chain reactions that open paths, calm hazards, or reshape spaces. They turn curiosity into understanding while reflecting the ecosystem's health—meant to be cared for, not exploited.

3. Biomes

Biome Definition & Example

- **Observable planetarium:** Players learn by watching and listening; the balance of passive observation and active probing scales with each ecosystem's complexity.

- **Interactive sandbox:** Players directly influence the ecosystem with their four abilities, creating readable systemic changes that open new paths.

Cliffs

Features:

- More verticality
- Cave-like areas
  - Still relatively open, but allows for echoes
- Connected to grassy plains and flatter areas
  - Parts of the plains have grass taller than the player, and must be navigated through
- Strong winds can affect the sheep, or even be loud enough to drown out sound if the player is too far
- Cloud spires
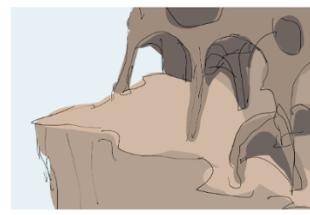
Level Design

The purpose of levels in this game is to provide a playground for the player to interact closely with Sheep and other creatures in the world. Overall, a **biome** should be an observable planetarium, an interactable sandbox, and a treasure trove waiting for player discovery.

Level Constraints

1. Ideally, every biome should have at least one Connected Ecosystem that includes sheep and player.

2. To prevent overcomplicated levels, the number of puzzle related creatures we can use in a single puzzle is restricted to a maximum of 3, with one of them being the key creature and 2 being the supporting creatures. This does not include sheep and player.
3. The maximum number of unique actions the player needs to do to solve a puzzle is also restricted to 3.
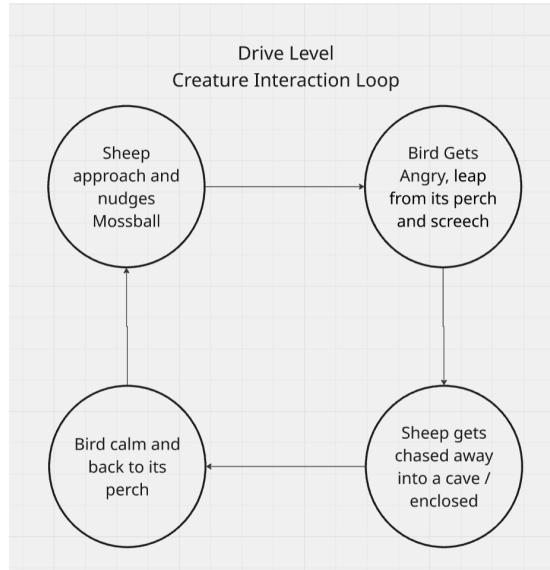

Connected Ecosystem Example

Level Example (Drive Tutorial)

In this level, players encounter a large bird patrolling near the central tree, guarding moss balls that are falling from the tree. Around the tree, sheep roam freely, grazing on grass and occasionally trying to nudge and roll the moss ball in an effort to claim it for themselves.

The terrain is forked: upon entering the area, the player immediately sees the tree at the center, the bird in motion, the sheep interacting with the moss ball, and **the final goal** — a canyon passage leading to the next area. However, the passage is blocked by **a large moss ball**, which must be cleared for progression.

Ecosystem

- The **bird defends the moss ball**, using its **Drive call** to redirect sheep.

- Sheep **redirect their movement** based on the sound direction, heading on a deadend road where the bird is facing.

Drive Level
Creature Interaction Loop
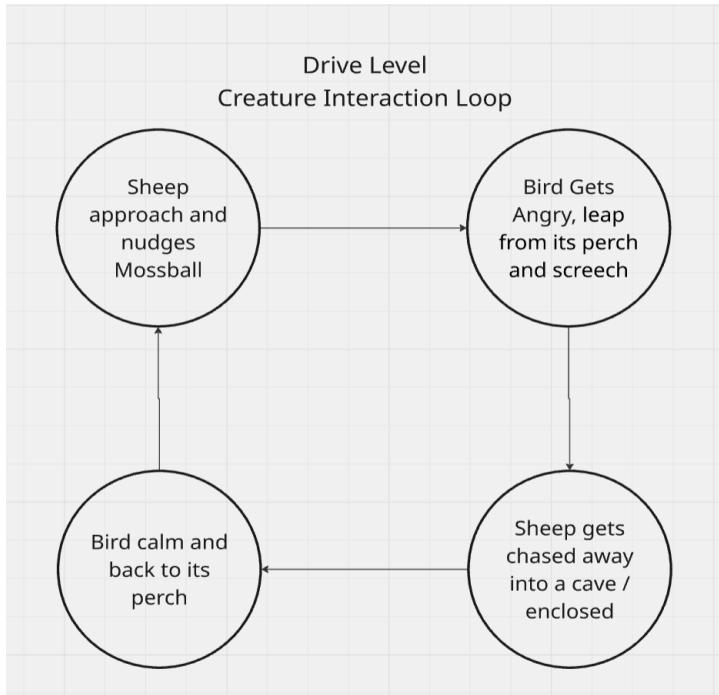
Player will learn to understand

- Sheep are capable of pushing and moving moss balls.

- The canyon entrance is the progression point, currently blocked.

- The bird emits a directional sound to **drive** sheep away from moss balls towards a dead end path, with an arrow pop up pointing towards the forward direction.

- The player can **record** this sound, use it to **control** sheep and push away the large obstacle moss ball.

Gameplay Flow

1. The player sees the bird, the sheep, and the moss ball interaction loop, as well as the moss ball blocking the canyon passage.

2. The player learns that the bird's **directional call** influences sheep movement.

3. The player records the bird's call and gains the ability to replay the **Drive sound**.

4. By replaying the sound in different directions, the player redirects sheep toward the large moss ball blocking the passage.

5. With the sheep pushing the moss ball aside, the canyon entrance is cleared, allowing access to the next area.

Narrative

Quick Overview

🟩 Baacadia Beat Sheet

Baacadia is a world afflicted by Harsh Noise—an all consuming sound that disrupts everything—audio, thoughts, and even language itself.

Discover records of the Caretakers who created the Harsh Noise, and find remnants of their mountainous Great Beasts, long disappeared from the land. Explore a world dominated by sound, and save it from its disruption.

In Baacadia, you play as Scout, a robot originally created for war. With the help of the mysterious sheep-like creature Cloudfens, you awaken once more with a new purpose.

Scout will travel the biome recording new sounds and solving puzzles while accompanied by its companions, the Cloudfens, who will help it out at every step along the way. While traveling, Scout must disable three relics which still emit Noise, disrupting the environment and the ecosystem around it.

Concepts & Representations

🟨 Baacadia Worldbuilding

Keywords & Themes

Coexistence, Natural & Artificial, The Power of Nature, Communication

Narrative Overview

Premise:
A small, forgotten robot awakens in the quiet, post-war world of Stratus, surrounded by remnants of both nature and technology. It is helped by Clofens— mysterious, sheep-like creatures—to navigate a land haunted by Noise: the leftover scars of an ancient war between progress and harmony.

Journey:
Scout, once built for war by the nomadic Caretakers, slowly rediscovers its origins while helping the Clofens cleanse the world of Harsh Noise. As they travel together, Scout learns that the Harsh Noise was created by the Caretakers using Noise Crystals, and that it was once a "solution" for a disaster they caused, but became co-opted for violence and ended up bringing their downfall. The Caretakers went too far in first, their extraction of the environment's resources, and later, their attempt to fix it.

Scout realizes that while Harsh Noise hurts the environment, Noise itself is essential to prevent the Silence, which would creep in without Noise to stave it off. As Scout discovers more about the past, it comes to learn that too much or too little of anything can cause unintended consequences, and that balance is needed for nature to thrive.

Audio

Overview

The audio of *Baacadia* seeks to **realize composition through ecology**, where every sound emerges naturally from the world and its creatures. Instead of relying on external music, the game builds a living score out of **diegetic sound sources**—robot melodies tied to player states, environmental call-and-response, ambient critters, and systemic/reactive wind.

Through dynamic mixing, spatial reverb, and careful key/chord management, the audio experience will shift fluidly as the player interacts with sheep, environment, and "The Noise." The goal is an ecosystem where **gameplay itself produces music**: shepherding actions, creature responses, and environmental changes layer together into a composition that feels both **organic and intentional**, connecting players emotionally to the world and their companions.